

Amendments to the Drawings:

The drawings are objected to as failing to comply with 37 CFR § 1.84(p) (5) because they include the following reference character(s) not mentioned in the description: 500 (Figure 5) and 600 (Figure 6). Corrected drawing sheets in compliance with 37 CFR § 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CRR § 1.121(b) are required in reply to the office action to avoid abandonment of the application

The attached sheet of drawings includes changes to Figs. 3A, 3B, 5 and 6. This sheet, which includes Figs. 3A, 3B, 5 and 6, replaces the original sheet including Figs. 3A, 3B, 5 and 6. In Figs. 3A and 3B, reference numeral 300 was added. In Figs. 5 and 6, reference numerals 500 and 600 were deleted.

REMARKS/ARGUMENTS

Applicant has carefully reviewed and considered the Office Action mailed on July 26, 2005, and the references cited therewith.

Claim 1, 10, and 13 are amended, no claims are canceled, and no claims are added; as a result, claims 1-26 are now pending in this application.

Drawings

The Examiner objected to Figures 3A, 3B, 5, and 6. Accordingly, Applicant is providing replacement sheets for these Figures herewith as discussed above.

Specification

The Examiner objected to the Title of the Application as not being descriptive. Accordingly, Applicant has amended the Title of the Application to Printhead Adjustment.

The Examiner also objected to the Specification stating that "applicant fails to name the figure to which he is referring throughout the Detailed Description. Applicant has taken a very methodical approach to describing the Figures in the Specification. For example, on page 2 of the application, Applicant recites at line 9, Figure 1 illustrates... This methodology is followed throughout the application. Specifically, when a Figure is discussed, the Figure is introduced. When discussion about another Figure begins, it is introduced.

Additionally, and probably more importantly, all numbers relating to a given Figure carry a number in the hundreds corresponding to that Figure number. For example, Figure 1 uses a 1XX prefix for each number that describes an element of that Figure. Accordingly, nozzle overlap zone 120 is describing the nozzle overlap zone in the embodiment of Figure 1.

In a logical manner, all of the elements of Figure 2, then, are given 2XX numbers. Accordingly, the optical sensor 254 is logically describing the optical sensor shown in the embodiment of Figure 2.

Applicant believes these approaches make the Application clear with respect to the subject matter of the Application. Accordingly, Applicant has not amended the Specification to overcome this objection. Applicant respectfully requests the Examiner to reconsider and withdraw the objection to the Specification based upon the explanation provided above.

§ 102 Rejection of the Claims

Claims 1, 2, 6, 7, 9, and 10 were rejected under 35 USC § 102(b) as being anticipated by Shimizu, et al. (U.S. Patent No. 6,550,886).

In the Office Action, dated July 26, 2005, the Examiner stated, with respect to dependent claim 3, that the Shimizu, et al. reference “does not teach a controller that interprets the data to identify a Y-axis offset of at least two ink drops.”

In contrast, Applicant’s independent claim 1, as amended, recites, besides other things:

a controller to interpret the positioning data to identify a Y axis offset of at least two ink drops based on the positioning data.

And, Applicant’s independent claim 10, as amended, recites, besides other things:

a controller to interpret the ink placement pattern information to identify X and Y axis offsets of at least two printheads based upon the ink placement pattern information.

As such, Applicant respectfully submits that each and every limitation of the Applicant’s independent claims 1 and 10, as amended, is not described by the Shimizu, et al. reference. Therefore, the Shimizu, et al. reference cannot support the § 102 rejection. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the § 102 rejection of independent claims 1 and 10, as well as the rejections of the claims that depend therefrom.

Claims 13 and 17 were rejected under 35 USC § 102(b) as being anticipated by Wyngaert, et al. (U.S. Patent No. 6,554,398).

Applicant has amended claim 13 to more clearly recite patentable subject matter and not in view of references cited by the Examiner. Applicant’s independent claim 13, as amended, recites, besides other things:

means for determining X and Y axis offsets of the printheads based on the positioning data, where the X and Y axis offsets are selected from the group including: X and Y offsets of the two printheads relative to each other, and X and Y offsets of the two printheads relative to a media advancement direction.

From a review of the Wyngaert, et al. reference, the Applicant was unable to locate a description of the embodiments recited by Applicant's independent claim 13. The Wyngaert, et al. reference appears to describe storing target positions and tolerances in the y-, x-, and z-directions and comparing the target positions with actual values sensed by the sensing means.

In contrast, the Wyngaert, et al. reference does not describe a means for determining X and Y axis offsets of the printheads based on the positioning data, where the X and Y axis offsets are selected from the group comprising: X and Y offsets of the two printheads relative to each other, and X and Y offsets of the two printheads relative to a media advancement direction, as recited by Applicant's independent claim 13.

As such, each and every element and limitation as recited in Applicant's independent claim 13 is not shown in the Wyngaert, et al. reference. Therefore, the Wyngaert, et al. reference cannot support the § 102 rejection. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the § 102 rejection for claim 13, as well as the rejections of the claims which depend therefrom.

Claims 18-22 were rejected under 35 USC § 102(b) as being anticipated by Segerstrom, et al. (U.S. Patent No. 6,213,580).

The Examiner cited Col., 12, line 12 of the Segerstrom et al. reference as describing the identifying of a position for two points on print media printed by a stationary, staggered printhead array. The Segerstrom et al. reference appears to describe printing a test pattern and including in the test pattern at least two reference ink drops from the reference print head module. In other words, the reference ink drops are actual ink drops that are printed on print media as the printhead is passing along its print path.

The Segerstrom et al. reference does not describe identifying a position for two points on print media printed by a stationary, staggered printhead array nor does the Segerstrom et al. reference describe defining two reference points based upon the position of the two points.

In contrast, Applicant's independent claim 18, recites, besides other things:

identifying a position for two points on print media printed by a stationary, staggered printhead array;

defining two reference points based upon the position of the two points;

As such, each and every element and limitation as recited in Applicant's independent claim 18 is not shown in the Segerstrom et al. reference. Therefore, the Segerstrom et al. reference cannot support the § 102 rejection. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the § 102 rejection for claim 18, as well as the rejections of the claims which depend therefrom.

§ 103 Rejection of the Claims

Claim 3 was rejected under 35 USC § 103(a) as being unpatentable over Shimizu, et al. (U.S. Patent No. 6,550,886) and further in view of Cowager, et al. (5,568,172). Claims 4, 5, 8, 11, and 12 were also rejected under 35 USC § 103(a) as being unpatentable over Shimizu, et al. (U.S. Patent No. 6,550,886) and further in view of Segerstrom, et al. (U.S. Patent No. 6,213,580).

Since claims 3, 4, 5, and 8 depend from allowable claim 1, and, since claims 11 and 12 depend from allowable claim 10, Applicant respectfully submits that claims 3, 4, 5, 8, 11, and 12 are deemed allowable. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the § 103 rejection of claims 3, 4, 5, 8, 11, and 12.

Claims 14 and 15 were rejected under 35 USC § 103(a) as being unpatentable over Wyngaert, et al. (U.S. Patent No. 6,554,398) and further in view of Segerstrom, et al. (U.S. Patent No. 6,213,580). Claim 16 was also rejected under 35 USC § 103(a) as being unpatentable over Wyngaert, et al. (U.S. Patent No. 6,554,398) and further in view of Shimizu, et al. (U.S. Patent No. 6,550,886).

Since claims 14, 15, and 16 depend from allowable claim 13, Applicant respectfully submits that claims 14, 15, and 16 are deemed allowable. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the § 103 rejection of claims 14, 15, and 16.

Claim 23 was rejected under 35 USC § 103(a) as being unpatentable over Segerstrom, et al. (U.S. Patent No. 6,213,580) and further in view of Shimizu, et al. (U.S. Patent No. 5,550,886). Since claim 23 depends from allowable claim 18, Applicant respectfully submits that claim 23 is deemed allowable.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the § 103 rejection of claim 23.

Claims 24 and 25 were rejected under 35 USC § 103(a) as being unpatentable over Serra, et al. (U.S. Patent No. 6,773,086) in view of Segerstrom, et al. (U.S. Patent No. 6,213,580) and Beauchamp (U.S. Patent No. 6,474,765). For the reasons provided above in connection with Applicant's independent claim 18, Applicant respectfully submits that independent claim 24 is also allowable.

That is, the Serra, et al. reference does not describe identifying a position for two points on print media printed by a stationary, staggered printhead array and defining two reference points based upon the position of the two points, as recited by Applicant's independent claim 24. The Serra, et al. reference appears to describe a method that reduces misalignment of a pair of staggered fluid ejector assemblies positioned along a first axis perpendicular to a second axis along which media moves past the assemblies. (See Abstract of the Serra, et al. reference).

The Segerstrom, et al. reference and the Beauchamp reference fail to cure the deficiencies of the Serra, et al. reference. As discussed above, the Segerstrom, et al. reference does not describe identifying a position for two points on print media printed by a stationary, staggered printhead array and defining two reference points based upon the position of the two points, as recited by Applicant's independent claim 24. The Beauchamp reference appears to describe an angular compensation step aligning the printing relative to the true direction of relative movement of print head(s) and print media so as to compensate for such misalignments. (See Abstract of the Beauchamp reference).

As such, each and every element and limitation as recited in Applicant's independent claim 24 is not shown in the Serra et al., the Beauchamp, or the Segerstrom, et al. references, either individually or in combination. Therefore, these references cannot support the § 103 rejection. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the § 103 rejection for claim 24, as well as the rejections of the claims which depend therefrom, including claim 25.

Claim 26 was rejected under 35 USC § 103(a) as being unpatentable over Serra, et al. (U.S. Patent No. 6,773,086) in view of Segerstrom, et al. (U.S. Patent No. 6,213,580) and Shimizu, et al. (U.S. Patent No. 5,550,886).

The Segerstrom et al. reference does not describe repeatedly ejecting ink from a nozzle while advancing the print media to print a reference line. Further, neither the Serra, et al. reference nor the Shimizu, et al. reference, either alone or in combination, appear to teach or suggest repeatedly ejecting ink from a nozzle while advancing the print media to print a reference line.

As such, each and every element and limitation is not provided in the references, either independently or in combination, to support a § 103 rejection of claim 26. Accordingly, Applicant respectfully requests the reconsideration and withdrawal of the rejection of claim 26.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney Gregg W. Wisdom at (360) 212-8052 to facilitate prosecution of this matter.

At any time during the pendency of this application, please charge any additional fees or credit overpayment to the Deposit Account No. 08-2025.

CERTIFICATE UNDER 37 CFR § 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS AMENDMENT Commissioner for Patents, P.O. BOX 1450, Alexandria, VA 22313-1450 on this 18th day of October, 2005.

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